

a listing fixture if the following are met:

(1) There is no access to the interior of the fixture from the cargo handling room.

(2) The fixture is vented to the engineroom or a similar nonhazardous area.

(3) The fixture is wired from outside the cargo handling room.

(4) The temperature on the cargo handling room surface of the glass lens, based on an ambient temperature of 40 degrees C, is not higher than 180 degrees C.

(h) A cargo handling room which precludes the lighting arrangement of paragraph (g) of this section, or where the lighting arrangement of paragraph (g) of the section does not give the required light, must have explosionproof lighting fixtures.

(i) *Enclosed spaces.* An enclosed space that is immediately above, below, or next to a cargo tank must not contain any electric equipment except equipment allowed for cargo handling rooms in paragraphs (f) and (g), and:

(1) Through runs of marine shipboard cable; and

(2) Watertight enclosures with bolted and gasketed covers containing only:

(i) Depth sounding devices;

(ii) Log devices; and

(iii) Impressed-current cathodic protection system electrodes.

(j) *Cargo hose stowage space.* A cargo hose stowage space must not have any electrical equipment except explosionproof lighting fixtures and through runs of marine shipboard cable.

(k) *Cargo piping in a space.* A space that has cargo piping must not have any electrical equipment except explosionproof lighting fixtures and through runs of marine shipboard cable.

(l) *Weather locations.* The following locations in the weather are Class I, Division 1 (Zone 1) locations (except the open deck area on an inorganic acid carrier which is considered a non-hazardous location) and may have only approved intrinsically safe, explosionproof, or purged and pressurized electrical equipment, and through runs of marine shipboard cable if the location is—

(1) Within 10 feet (3 m) of:

(i) A cargo tank vent outlet;

(ii) A cargo tank ullage opening;

(iii) A cargo pipe flange;

(iv) A cargo valve;

(v) A cargo handling room entrance; or

(vi) A cargo handling room ventilation opening; or

(2) On a tankship and on the open deck over the cargo area and 10 feet (3 m) forward and aft of the cargo area on the open deck and up to 8 feet (2.4 m) above the deck.

(3) Within 5 meters (16 ft) of cargo pressure/vacuum valves with an unlimited height; or

(4) Within 10 meters (33 ft) of vent outlets for free flow of vapor mixtures and high velocity vent outlets for the passage of large amounts of vapor, air or inert gas mixtures during cargo loading and ballasting or during discharging.

(m) *Other spaces.* Except for those spaces listed in paragraphs (e) through (k), a space that has a direct opening to any space listed in paragraphs (e) through (l) must have only the electric installations that are allowed for the space to which it opens.

(n) *Duct keel ventilation or lighting.* (1) The lighting and ventilation system for each pipe tunnel must meet ABS Steel Vessel Rules (incorporated by reference; see 46 CFR 110.10-1), section 5-1-7/31.17.

(2) If a fixed gas detection system is installed, it must meet the requirements of IMO SOLAS 74 (incorporated by reference; see 46 CFR 110.10-1) and Part 4, Chapter 3 of ABS Steel Vessel Rules.

[CGD 74-125A, 47 FR 15236, Apr. 8, 1982, as amended by CGD 82-096, 49 FR 4947, Feb. 9, 1984; CGD 94-108, 61 FR 28285, June 4, 1996; 61 FR 33045, June 26, 1996; 62 FR 23909, May 1, 1997; USCG-2003-16630, 73 FR 65200, Oct. 31, 2008; USCG-2012-0832, 77 FR 59781, Oct. 1, 2012]

§ 111.105-32 Bulk liquefied flammable gas and ammonia carriers.

(a) Each vessel that carries bulk liquefied flammable gases or ammonia as a cargo, cargo residue, or vapor must meet the requirements of this section.

(b) As used in this section:

(1) The terms “gas-safe” and “gas-dangerous” spaces are used as defined in §154.7 of this chapter.

(2) The term “gas-dangerous” does not include the weather deck of an ammonia carrier.

(c) Each submerged cargo pump motor design must receive concept approval by the Commandant (CG-ENG) and its installation must receive plan approval by the Commanding Officer, Marine Safety Center.

(d) Electrical equipment must not be installed in a gas-dangerous space or zone, except:

(1) Intrinsically safe electrical equipment and wiring, and

(2) Other equipment as allowed in this section.

(e) A submerged cargo pump motor, if installed in a cargo tank, must meet §111.105-31(d).

(f) Electrical equipment must not be installed in a hold space that has a tank that is not required to have a secondary barrier under §154.459 of this chapter, except:

(1) Through runs of marine shipboard cable;

(2) Explosionproof lighting fixtures;

(3) Depth sounding devices in gastight enclosures;

(4) Log devices in gastight enclosures;

(5) Impressed current cathodic protection system electrodes in gastight enclosures; and

(6) Armored or MI type cable for a submerged cargo pump motor.

(g) Electrical equipment must not be installed in a space that is separated by a gastight steel boundary from a hold space that has a tank that must have a secondary barrier under the requirements of §154.459 of this chapter, except:

(1) Through runs of marine shipboard cable;

(2) Explosionproof lighting fixtures;

(3) Depth sounding devices in gastight enclosures;

(4) Log devices in gastight enclosures;

(5) Impressed current cathodic protection system electrodes in gastight enclosures;

(6) Explosionproof motors that operate cargo system valves or ballast system valves;

(7) Explosionproof bells for general alarm systems; and

(8) Armored or MI type cable for a submerged cargo pump motor.

(h) A cargo-handling room must not have any installed electrical equipment, except explosionproof lighting fixtures.

(i) A space for cargo hose storage or a space that has cargo piping must not have any installed electrical equipment, except:

(1) Explosionproof lighting fixtures; and

(2) Through runs of marine shipboard cable.

(j) A gas dangerous zone on the open deck must not have any installed electrical equipment, except:

(1) Explosionproof equipment that is necessary for the operation of the vessel; and

(2) Through runs of marine shipboard cable.

(k) A space, except those named in paragraphs (f) through (i) of this section, that has a direct opening to gas-dangerous spaces or zones must have no electrical equipment except as allowed in the gas-dangerous space or zone.

(l) Each gas-dangerous space that has lighting fixtures must have at least two branch circuits for lighting.

(m) Each switch and each overcurrent protective device for any lighting circuit that is in a gas-dangerous space must open all conductors of the circuit simultaneously.

(n) Each switch and each overcurrent protective device for lighting in a gas-dangerous space must be in a gas-safe space.

[CGD 74-125A, 47 FR 15236, Apr. 8, 1982, as amended by CGD 77-069, 52 FR 31626, Aug. 21, 1987; CGD 94-108, 61 FR 28285, June 4, 1996; 62 FR 23909, May 1, 1997; USCG-2009-0702, 74 FR 49234, Sept. 25, 2009; USCG-2012-0832, 77 FR 59781, Oct. 1, 2012]

§ 111.105-33 Mobile offshore drilling units.

(a) *Applicability.* This section applies to each mobile offshore drilling unit.

(b) *Definitions.* As used in this section:

(1) “Enclosed spaces” are locations delineated by floors, bulkheads, or